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[54] **BLACK AND WHITE ELECTROPHORETIC PARTICLES AND METHOD OF MANUFACTURE**

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[52] **U.S. Cl.** **252/572**; 252/73; 252/77; 252/79; 313/483; 359/296

[58] **Field of Search** ..... 292/572, 73, 77, 292/79; 313/483; 204/299 R; 525/309; 359/296

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[57] **ABSTRACT**

A process for forming dielectric particles includes admixing a first monomer and a crosslinker in a liquid dispersion medium to form a first mixture. A second mixture of an initiator and a stabilizer is prepared and added to the first mixture to form a third mixture in which the first monomer polymerizes to form polymer particles. A second monomer is introduced to the third mixture, the second monomer at least partially polymerizing and grafting upon the previously formed polymer particles. A functional monomer effecting the outer surface charge characteristics of the final particles may be introduced to the third mixture when the second monomer is introduced. The particles may be employed in an electrophoretic fluid for use in an electrophoretic display by dispersing the dielectric particles prepared by the two stage polymerization process in a dielectric fluid.

15 Claims, 1 Drawing Sheet